

# What Historical Architects Can Learn From the Preservation Trades — and Why They Should

**H**istoric preservation is an enormous and diverse field. It combines science, art, economics, law, and public policy. However, at its most basic, historic preservation is about buildings— rural and urban; high style and vernacular; instantly recognizable national icons, or integrated anonymously into the fabric of community and landscape. It is only in the bricks and mortar, structure, form, and finish executed over time by the hands of workers of all levels of skill, sophistication, or inspiration that there is anything to value, or to preserve.

People who commit themselves to careers in preservation do so because they really care about old buildings and what they represent, and spend many years in training for a demanding field not generally noted for excessive financial rewards. However, anyone who has worked in preservation for any length of time can tell horror stories about exceptional historic buildings butchered through the application of heavy-handed treatments pre-

scribed by the most highly trained and credentialed professionals, or point out jewels of restoration completed by amateurs with a sensitive eye. Preservation philosophy has been thoroughly articulated in laws, policies, standards, and guidelines, all of which attempt, at some level, to address the significance and integrity of historic structures and encourage compatible and sympathetic treatments. Technologies for diagnosing and treating the problems of historic buildings are

becoming increasingly sophisticated. So why are there so many horror stories? I believe that one of the principal reasons is that many architects both in general practice and in historic preservation, have become increasingly isolated from the actual physical processes of building construction, repair, and maintenance.

Since the architectural firm of Perry, Shaw, and Hepburn undertook the pioneering work of restoring Colonial Williamsburg in the 1930s and initiated the professionalization of preservation practice, it has been pretty much axiomatic that architects are the lead preservation professionals. Orin Bullock wrote in 1966 in *The Restoration Manual*, one of the first preservation textbooks, that:

The architect for a restoration project should be responsible for the entire operation including historical, archaeological, and special research as well as the architectural research. Such centralization of responsibility will prove economical to the sponsor in the long run. Whether the architect has full charge of the work or not, it will still be necessary for him to coordinate and evaluate information and eventually recommend the exact scope of the project .... In any event, every step of the restoration project must be under the close and meticulous supervision of the architect in charge.<sup>1</sup>

However, in accepting responsibility for the overall direction and guidance of preservation projects, the most respected historical architects have always acknowledged the role of the craftsmen who actually performed the work. Charles E. Peterson wrote:

The men who actually assemble a building on its site— by hand or with machines— work closely with the architect. In practice, it is just about impossible to define the boundaries between the two vocations. Architects must still rely on traditional practices and standards of the trades, for no building can be built with all of its details fully covered by drawings and written specifications. There is a great deal of give-and-take on the job, especially in restoration work. To me, working

Nick Wyman, assistant park historical architect, and Lenette Curtis, architecture intern, learning masonry skills at a brick repointing workshop at Independence National Historical Park. Photo by the author.



directly with good mechanics in solving problems is one of the great pleasures of building.<sup>2</sup>

The respect accorded to the building trades was combined with the fear that many traditional craft skills were in danger of dying out. These two factors provided the impetus for a number of proposals regarding the establishment of preservation training centers and development of career programs for preservation craftsmen. In 1968, the state of preservation training was assessed in a document entitled "Report of Committee on Professional and Public Education for Historic Preservation to the Trustees of the National Trust for Historic Preservation." The Committee, chaired by Wallace Muir Whitehill, director of the Boston Athenaeum, characterized the state of preservation education as "elementary," citing a "relatively small awareness within the architectural and planning professions of the importance of restoration and preservation techniques." The report concluded that professional

project planning, and management, as well as the philosophical basis for preservation work. The renaissance in this sector of the building trades is part of a broad cultural movement represented by the proliferation of publications like *The Old House Journal* and *Fine Homebuilding*. Ordinary people, reacting against shoddy, mass-produced new construction, have embraced restoration and the production of new hand-crafted houses with a passion, embarking on do-it-yourself projects, and creating new markets for craftsmen with traditional and hybrid trade skills. The Timber Framers Guild of North America and the Canadian Log Builders Association have evolved as dynamic and creative forces in promoting high quality craft-centered construction. The Timber Framers Guild, Traditional Timberframe Research and Advisory Group represents one example of a trades organization with a highly sophisticated preservation component. Ironically, these developments have largely escaped the notice of the architectural and preservation community.

Professional preservation education opportunities also experienced dramatic growth in the years following the publication of the Whitehill Report. Since Columbia University instituted the first degree program in 1973, a total of 15 institutions have developed graduate programs in historic preservation, along with approximately 55 other colleges and universities now offering coursework or certificate programs. With professionalization comes specialization. In 1977, the Secretary of the Interior's Professional Qualification Standards recognized six specific disciplines for professional practice in the field of historic preservation. Responding to the 1992 amendments to the Historic Preservation Act, proposed revisions call for a new set of Historic Preservation Professional Qualifications and Guidelines providing standards for a total of 13 separate fields. The new draft document provides standards for: Prehistoric Archeology; Architectural History; Conservation; Cultural Anthropology; Curation; Folklore; Historic Architecture; Historic Landscape Architecture; Historic Preservation Planning; Historic Preservation; History; and Historic Engineering.<sup>4</sup> While five of the disciplines include some level of responsibility for specifying or directing physical treatment of historic structures, discussion of the trade skills required to execute the work is notably absent. The invisibility of the building trades was addressed in a 1986 report of the U.S. Congressional Office of Technology Assessment citing the need for training programs to:

...return to craftsmen the decision-making capability that has been gradually and systematically denied them by the construction and building industries for the last few



The first annual University of Oregon Summer Preservation Field School in 1995, featured "hands on" training in carpentry and masonry for preservation students, working side-by-side with maintenance workers and preservation specialists from the USDA Forest Service, National Park Service, and Oregon State Parks and Recreation Department. Photograph by Lorraine Platz.

education in historic preservation should be focused on both architecture and the building crafts. Emphasizing the need for on-the-job training for journeymen craftsmen, the Subcommittee on Conservation of the Traditional Building Crafts also recommended the establishment of a clearinghouse to put craftsmen and restoration teams in contact with clients rehabilitating historic properties.<sup>3</sup> These recommendations, along with a report from the National Park Service Office of Archaeology and Historic Preservation, eventually led the National Park Service to establish a Building Restoration Specialist classification for preservation craftsmen, and to the establishment of the Williamsport Preservation Training Center in 1977.

In 1997, it is evident that, far from dying out, the preservation trades are flourishing. Programs like those at Belmont Technical College, the Institute for Preservation Training, and the Preservation Institute for the Building Crafts offer broad-based training not just in trade skills, but in

decades. Craftsmanship has been sacrificed to uniformity, mass-production, and economy. Restoration is challenging, varied, and often difficult. Every practitioner involved in structural restoration and rehabilitation should comprehend the behavior of materials and their basic physical and chemical properties.<sup>5</sup>

Professor James Marston Fitch has characterized the disenfranchisement of the building trades as a condition analogous to the “headless hand.” The corollary condition, prevalent among architects and preservation professionals, is that of the “handless head.” The symbiotic relationship between architect and craftsman described by Charles Peterson requires communication and informed participation by both parties. While it is undeniably true that there is a critical need for expanded preservation training opportunities in the trades, there is an equally acute shortage of architects and preservation professionals with the training and skills to participate meaningfully in a dialog with the people who actually do the physical work of preservation.

This lack of engagement with the process of construction is one aspect of a widening gap between theoretical and practical knowledge in the general practice of architecture. A 1995 study by the National Academy of Sciences National Research Council entitled “Education of Architects and Engineers for Careers in Facility Design and Construction” found that a large percentage of recent graduates in architecture and engineering were “unfamiliar with practical problems of design and construction.” Similar findings emerged in a report by the National Institute for Architectural Education, which stated that many intern architects “lack skills as well as a sensibility to the real world environment of professional practice.”<sup>6</sup> One program at Arizona State University developed to remedy this educational deficit involved architecture students in tracking the progress of actual construction projects, and interviewing contractors and builders. The instructor noted that “[t]he students are usually shocked to discover that a design decision might actually happen on the construction site [and] that a detail drawing might get tossed altogether, and figured out right there.”<sup>7</sup> Programs like this are the exception rather than the norm, and relatively few architects have the opportunity to learn what actually takes place on the construction site before they become responsible for directing projects.

This distinction between the design detail and the constructed element is the basis for British woodcraftsman David Pye’s proposition that “design proposes, workmanship disposes” which he explored as follows in *The Art and Nature of Workmanship*:

Design is what, for practical purposes, can be conveyed in words and by drawing: workmanship is what, for practical purposes, can not. In practice the designer hopes the workmanship will be good, but the workman decides whether it shall be good or not. On the workman’s decision depends a great part of the quality of our environment.... Our environment in its visible aspect owes far more to workmanship than we realize. There is in the man-made world a whole domain of quality which is not the result of design and owes little to the designer. On the contrary, indeed, the designer is deep in its debt, for every card in his hand was put there originally by the workman. No architect could specify ashlar until a mason had perfected it and shown him that it could be done.<sup>8</sup>

The implications of this statement are especially relevant in preservation, where so much of the actual work of preserving buildings involves either the use of archaic craft skills, or the disciplined employment of contemporary technologies in a specialized fashion. David Pye’s definition of “craftsmanship” can also serve as a model description for many aspects of preservation work, as opposed to standardized conventional construction:

If I must ascribe a meaning to the word “craftsmanship,” I shall say as a first approximation that it means simply workmanship using any kind of technique or apparatus, in which the quality of the result is not predetermined, but depends on the judgement, dexterity and care which the maker exercises as he works. The essential idea is that the quality of the result is continually at risk during the process of making.... With the workmanship of risk we may contrast the workmanship of certainty, always to be found in quantity production, and found in its pure state in full automation. In workmanship of this sort the quality of the result is exactly determined before a single saleable thing is made.<sup>9</sup>

Most contemporary architectural practice is defined by the intention that working drawings and specifications will control every aspect of the construction process, and that standardized construction materials and systems make it at least theoretically possible for the construction of new buildings to be realized solely by the “workmanship of certainty.” On the other hand, most preservation work falls, to some degree, into the category of “workmanship of risk,” which by its very nature is highly dependent on the skill and judgement of the people performing the work. It’s interesting to compare construction drawings for preservation projects done in the 1940s and ’50s, with those being produced today. Typically, the older drawings consist of



*The Peter French Round Barn in Harney County Oregon, subject of the first annual University of Oregon Summer Preservation Field School. Photo by the author.*

only a few pages of usually elegantly rendered plans or elevations, a handful of details, and some notes indicating the general scope and extent of the work. Newer construction documents tend to be voluminous and exhaustive, prescribing every imaginable condition and treatment technique in excruciating detail. This evolution in the format and content of construction documents speaks volumes about the change in the relationship between architects and craftsmen. Specifications and drawings have replaced dialog, and the give-and-take of the close working relationship described by Charles Peterson. There are a number of reasons for the breakdown in communication between designers and builders. One of the most common is a continuing belief in the myth that all the good craftsmen really have disappeared, and that it is up to the architect to extract decent workmanship from mediocre and unscrupulous contractors by means of iron-clad construction documents.

There are also many aspects of the design and contracting process which discourage communication between the designer and the people who execute the work. Architects rarely have the opportunity to follow a project all the way through design and construction. Design work, project management, and construction supervision are often performed by a number of people over the course of a project. Continuity and contact among professionals at different stages of a project may be minimal. Contracting practices (especially in public sector work) usually follow a low-bid, worst-case scenario, discourage pre-qualification of bidders, and in many cases prohibit communication with qualified potential contractors. Lack of flexibility in contracting can make it difficult to separate out "preservation intensive" elements for separate award to specialized preservation teams. Architects have few opportunities to communicate with individual craftsmen on a job, and the fear of costly change orders limits their willingness to make design changes or alter scopes of work during con-

struction. Also, the lack of opportunities for post-construction evaluation mean that architects rarely get to see first hand what works, and what doesn't work on projects.

Because preservation has grown into such a large, complex, and multi-disciplinary enterprise, it would be almost impossible to reproduce the learning and working environment that existed when people like Charles Peterson and Henry Judd served as mentors to most of the handful of active preservation professionals. Hugh Miller, former NPS Chief Historical Architect, described the experience of working with them as follows:

They knew most of the practicing historical architects and critiqued NPS and private restoration projects, sometimes ruthlessly. Under their guidance, we researched a project, developed the construction documents, and restored the building. We learned a lot and were able to talk about our successes and failures. The "carpenters carnivals" held by the NPS in the 1960s were forums for the exchange of ideas and skills learned on site. However, by 1970 the highly structured often diverse, organizations of the various NPS parks and regional and central design offices provided little opportunity for learning from the building or even from each other.<sup>10</sup>

Realizing the critical need for a new way of providing these kinds of experiences for historical architects, Lee Nelson, Hugh Miller, and Emogene Bevitt created The Skills Development Plan for Historical Architects in the National Park Service in 1986. It was a significant attempt to catalog the broad range of knowledge and skills required to treat historic structures, and set up a systematic framework for acquiring them. A large percentage of the skills identified as fundamental for historical architects deal specifically with understanding traditional building materials and craft practices, affirming once again the critical nature of the link between head and hand.

There are a number of encouraging signs that new bonds are being formed among preservation professionals—architects, conservators, and preservationists—and specialists in the building trades. The emergence of the Preservation Trades Network as a task force of the Association for Preservation Technology is an indication of the vitality of the trades, and their ability to contribute actively throughout all stages of preservation projects. Emerging cooperative agreements between preservation skills programs and academic preservation programs have the potential to enrich the students of each, and develop patterns of communication and mutual respect that can only benefit the conservation of the built environment. In historic preservation the relationship between design and

craftsmanship is analogous to the correspondence between significance and integrity. It is only in reference to each other that the full potential and meaning of each can be realized.

#### Notes

- <sup>1</sup> Orin M. Bullock, Jr. *The Restoration Manual*. (Norwalk, Connecticut, Silvermine Publishers Inc., 1966) pp. 3-4.
- <sup>2</sup> Charles E. Peterson, "The Role of the Architect in Historical Restorations." *Preservation and Conservation: Principles and Practices*. Sharon Timmons ed. (Washington, DC, The Preservation Press, 1976) p. 5.
- <sup>3</sup> Stephen W. Jacobs, A.I.A. "The Education of Architectural Preservation Specialists in the United States." *Preservation and Conservation: Principles and Practices*, Sharon Timmons, ed. (Washington DC, The Preservation Press, 1976) pp. 460-477.
- <sup>4</sup> Federal Register: June 20, 1997 (Volume 62, Number 119). From the Federal Register Online via GPO Access [wais.access.gpo.gov].
- <sup>5</sup> U.S. Congress, Office of Technology Assessment, Technologies for Prehistoric and Historic Preservation, OTA-E-319 (Washington, DC: U.S. Government Printing Office, September, 1986.) p. 153.
- <sup>6</sup> Michael J. Crosbie. "The Schools: How They're Failing the Profession," *Progressive Architecture*. (Penton Publishing, September, 1995) pp. 47-51, 96, & 97.
- <sup>7</sup> Michael J. Crosbie. "Why Can't Johnny Size A Beam?" *Progressive Architecture*. (Penton Publishing, June, 1995) p. 94.
- <sup>8</sup> Pye, David. *The Nature and Art of Workmanship*, (Cambridge University Press, 1968.) p. 1-2.
- <sup>9</sup> Ibid. p. 4.
- <sup>10</sup> Hugh C. Miller. "The Education of Historical Architects and a Second Look at the NPS's Skills Development Plan". (APT Bulletin, Vol. XXVIII, No. 1-2, 1996) p. 32-34.

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Richard L. Hayes

# Empowering the Craftsperson

## Mantra: Inspect/Repair/Replace

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**I**n the current fiscal climate there needs to be increased efficiency in the performance of maintenance and repair activities for historic buildings. Progressive historic building maintenance is necessary to extend the useful life of buildings and conserve materials. Currently, the procedures entail a inspect, specify work, issue repair order, verify work. A method to achieve pliable maintenance is by empowering the trades- and craftspeople to perform inspections and immediately repair or maintain component. There are two concepts to the empowerment effort. The concepts can be termed toolbelt and free-range. Numerous other terms could be applied to the concepts. Basic to each approach, regardless of terms, is an underlying philosophy of inspection and concurrent repair. Neither one of these options is currently practiced as outlined below; they are offered as propositions for evaluations of current practices.

The first inspect and repair scenario does not require a truck load of tools and materials—the trust is that while an employee is at a building,

they repair minor deficiencies discovered in the performance of other tasks. These repairs are on a scale where a well-equipped toolbelt and judgment to execute suffice. Initially the person(s) could be on site to do a building condition assessment or some other task associated with a building. The notion is that there is a scale of repairs and maintenance items which take small effort to do while at the site—instead of returning at a future date. Frequently, small problems left unattended make for future major headaches. An example would be a team (person) being sent to do a building condition assessment. While on site the trades- and craftsperson would be empowered to repair or maintain minor items as they are found. For instance, in the above example during the course of inspecting gutters, they are found to be loose and full of debris. The inspector would have the latitude to take the extra time to secure and clean the gutters. Another example would be the repairing of a sash cord during a window inspection. This inspect and repair approach saves time by cutting out return trips to a building.